

PATENT
Attorney Docket No. PC10770B US

Claim Listing:

1-9. (Cancelled)

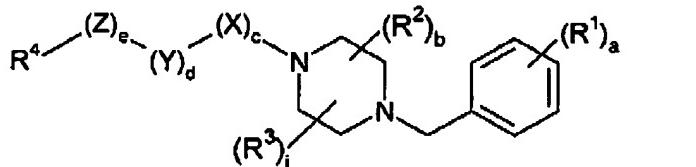
10. (Currently Amended) A pharmaceutical composition for (i) treating or preventing a disorder or condition selected from autoimmune diseases, rheumatoid arthritis, type I diabetes (recent onset), lupus, inflammatory bowel disease, optic neuritis, psoriasis, multiple sclerosis, polymyalgia rheumatica, uveitis, and vasculitis, acute and chronic inflammatory conditions osteoarthritis, adult Respiratory Distress Syndrome, Respiratory Distress Syndrome of infancy, ischemia reperfusion injury, glomerulonephritis, and chronic obstructive pulmonary disease (COPD) allergic conditions, asthma and atopic dermatitis, inflammation associated with infection, viral inflammation, influenza, hepatitis and Guillain-Barre, chronic bronchitis, chronic or acute tissue, cell, and solid organ transplant rejection, xeno-transplantation, atherosclerosis, restenosis, HIV infectivity (co-receptor usage), and granulomatous diseases, sarcoidosis, leprosy and tuberculosis, and sequelae associated with cancers, multiple myeloma; limiting the production of cytokines and/or TNF at inflammatory sites, as a consequence of decreasing cell infiltration; for treating diseases and/or congestive heart failure, linked to TNF and IL-1 and for treating pulmonary emphysema or dyspnea associated therewith, emphysema; HIV-1, HIV-2, HIV-3; cytomegalovirus (CMV), adenoviruses, Herpes viruses (*Herpes zoster* and *Herpes simplex*), for treating sequelae associated with infection where such infection induces production of detrimental inflammatory cytokines and/or TNF, fungal meningitis, joint tissue damage, hyperplasia, pannus formation and bone resorption, psoriatic arthritis, hepatic failure, bacterial meningitis, Kawasaki syndrome, myocardial infarction, acute liver failure, lyme disease, septic shock, cancer, trauma, and malaria, in a mammal, or (ii) treating or preventing a disorder or condition that can be treated or prevented by inhibiting chemokine binding to the receptor CCR1 in a mammal, comprising an amount of a compound according to claim 20, or a pharmaceutically acceptable salt thereof, that is effective in treating or preventing such disorder or condition and a pharmaceutically acceptable carrier.

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11. (Cancelled)

12-19. (Cancelled)

20. (Currently Amended) A compound of the formula



or the pharmaceutically acceptable salt thereof; wherein

R^1 is independently selected from hydrogen, halo, cyano, nitro, trifluoromethyl, trifluoromethoxy, (C_1 - C_6)alkyl, hydroxy or (C_1 - C_6)alkylcarbonyloxy;

R^2 and R^3 are each independently selected from (C_1 - C_6)alkyl, (C_3 - C_8)cycloalkyl, amino(C_1 - C_6)alkyl, amino(C_3 - C_8)cycloalkyl, (C_1 - C_6)alkylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkylamino(C_3 - C_8)cycloalkyl, hydroxy(C_1 - C_6)alkyl, (C_1 - C_6)alkoxycarbonylamino(C_1 - C_6)alkyl, ureido(C_1 - C_6)alkyl, (C_1 - C_6)alkylureido(C_1 - C_6)alkyl, (C_1 - C_6)alkylureido(C_1 - C_6)alkyl, (C_2 - C_9)heteroaryl(C_1 - C_6)alkyl or (C_2 - C_9)heterocycloalkyl(C_1 - C_6)alkyl;

R^4 is (R^5)f(R^6)g(C_6 - C_{10})aryl wherein f, g and h are independently 1 or 2;

R^5 is (C_2 - C_9)heterocycloalkylcarbonyl, (C_2 - C_9)heteroarylcarbonyl, (C_2 - C_9)heteroaryl(C_1 - C_6)alkylaminocarbonyl, (C_2 - C_9)heterocycloalkyl(C_1 - C_6)alkylaminocarbonyl, (C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkylaminocarbonyl, ureido(C_1 - C_6)alkylaminocarbonyl, (C_1 - C_6)alkylureido(C_1 - C_6)alkylaminocarbonyl, ((C_1 - C_6)alkyl)2ureido(C_1 - C_6)alkylaminocarbonyl, aminosulfonyl(C_1 - C_6)alkylaminocarbonyl, (C_1 - C_6)alkylaminosulfonyl(C_1 - C_6)alkylaminocarbonyl, (C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkylcarbonylamino, cyanoguanidino(C_1 - C_6)alkylcarbonylamino, (C_1 - C_6)alkylcyanoguanidino(C_1 - C_6)alkylcarbonylamino, ((C_1 - C_6)alkyl)2cyanoguanidino(C_1 - C_6)alkylcarbonylamino, aminocarbonyl(C_1 - C_6)alkylcarbonylamino, (C_2 - C_9)heteroaryl(C_1 - C_6)alkylcarbonylamino, (C_2 - C_9)heterocycloalkyl(C_1 - C_6)alkylcarbonylamino, aminosulfonyl(C_1 - C_6)alkylcarbonylamino, amino(C_1 - C_6)alkylureido, (C_1 - C_6)alkylamino(C_1 - C_6)alkylureido, ((C_1 - C_6)alkyl)2amino(C_1 - C_6)alkylureido, (C_2 - C_9)heterocycloalkyl(C_1 - C_6)alkylureido, (C_2 -

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Amendment and Response to OA dated 12/13/04

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C₆)alkyl)₂cyanoguanidino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylamino(C₁-C₆)alkyl, ureido(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkylureido(C₁-C₆)alkylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂ureido(C₁-C₆)alkylamino(C₁-C₆)alkyl, aminocarbonyloxy(C₁-C₆)alkylamino(C₁-C₆)alkyl, acetylamino(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, aminocarbonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylaminocarbonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂aminocarbonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, aminosulfonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, (C₂-C₉)heterocycloalkyloxycarbonylamino(C₁-C₆)alkyl, cyanoguanidino(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, cyano(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylamino(C₁-C₆)alkylaminocarbonyl amino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, aminocarbonyl(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylcarbonylamino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkoxycarbonyl amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₂-C₉)heterocycloalkyloxycarbonyl amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₂-C₉)heteroaryloxycarbonylamino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₂-C₉)heteroaryl(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, ureido(C₁-C₆)alkylureido(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂ureido(C₁-C₆)alkylureido(C₁-C₆)alkyl, cyanoguanidino(C₁-C₆)alkylureido(C₁-C₆)alkyl, amino(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylamino(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂amino(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, acetylamino(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, ureido(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂ureido(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, cyanoguanidino(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, (C₁-C₆)alkyl(cyanoguanidino)(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂(cyanoguanidino)(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, aminocarbonyl(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, (C₁-C₆)alkoxycarbonylamino(C₁-

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C_6)alkylsulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_2\text{-}\text{C}_9$)heterocycloalkyloxycarbonylamino($\text{C}_1\text{-}$
 C_6)alkylsulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_2\text{-}\text{C}_9$)heteroaryloxycarbonylamino($\text{C}_1\text{-}$
 C_6)alkylsulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, aminosulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_1\text{-}$
 C_6)alkylaminosulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, (($\text{C}_1\text{-}\text{C}_6$)alkyl)₂aminosulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl,
cyanoguanidino($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_1\text{-}\text{C}_6$)alkyl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, (($\text{C}_1\text{-}$
 C_6)alkyl)₂(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_2\text{-}\text{C}_9$)heterocycloalkyl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl,
($\text{C}_2\text{-}\text{C}_9$)heteroaryl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_2\text{-}\text{C}_9$)heterocycloalkyl($\text{C}_1\text{-}$
 C_6)alkyl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_2\text{-}\text{C}_9$)heteroaryl($\text{C}_1\text{-}\text{C}_6$)alkyl(cyanoguanidino)($\text{C}_1\text{-}$
 C_6)alkyl, amino($\text{C}_1\text{-}\text{C}_6$)alkyl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_1\text{-}\text{C}_6$)alkylaminocarbonyl($\text{C}_1\text{-}$
 C_6)alkyl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, (($\text{C}_1\text{-}\text{C}_6$)alkyl)₂aminocarbonyl($\text{C}_1\text{-}$
 C_6)alkyl(cyanoguanidino)($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_2\text{-}\text{C}_9$)heterocycloalkylsulfonyl, amino($\text{C}_1\text{-}$
 C_6)alkylaminosulfonyl, ($\text{C}_1\text{-}\text{C}_6$)alkylaminocarbonyl($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, (($\text{C}_1\text{-}\text{C}_6$)alkyl)₂amino($\text{C}_1\text{-}$
 C_6)alkylaminosulfonyl, ($\text{C}_2\text{-}\text{C}_9$)heteroarylaminosulfonyl, ureido($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, ($\text{C}_1\text{-}$
 C_6)alkylureido($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, (($\text{C}_1\text{-}\text{C}_6$)alkyl)₂ureido($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, ($\text{C}_1\text{-}$
 C_6)alkylsulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, ($\text{C}_1\text{-}\text{C}_6$)alkoxycarbonylamino($\text{C}_1\text{-}$
 C_6)alkylaminosulfonyl, ($\text{C}_2\text{-}\text{C}_9$)heterocycloalkyloxycarbonylamino($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, ($\text{C}_2\text{-}$
 C_9)heteroaryloxycarbonylamino($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, aminocarbonyl($\text{C}_1\text{-}$
 C_6)alkylaminosulfonyl, cyanoguanidino($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, ($\text{C}_2\text{-}\text{C}_9$)heteroaryl($\text{C}_1\text{-}$
 C_6)alkylaminosulfonyl, ($\text{C}_2\text{-}\text{C}_9$)heterocycloalkylaminosulfonyl, halo($\text{C}_1\text{-}\text{C}_6$)alkylaminocarbonyl,
hydroxy($\text{C}_1\text{-}\text{C}_6$)alkylureido, halo($\text{C}_1\text{-}\text{C}_6$)alkylsulfonylamino, ($\text{C}_1\text{-}\text{C}_6$)alkoxycarbonyl($\text{C}_1\text{-}$
 C_6)alkylamine($\text{C}_1\text{-}\text{C}_6$)alkyl, hydroxy($\text{C}_1\text{-}\text{C}_6$)alkylaminocarbonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, halo($\text{C}_1\text{-}$
 C_6)alkylsulfonylamino($\text{C}_1\text{-}\text{C}_6$)alkyl, aminosulfonyl, ($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, (($\text{C}_1\text{-}$
 C_6)alkyl)₂aminosulfonyl, hydroxy($\text{C}_1\text{-}\text{C}_6$)alkylaminosulfonyl, or ($\text{C}_1\text{-}\text{C}_6$)alkoxy($\text{C}_1\text{-}$
 C_6)alkylaminosulfonyl;

R^6 and R^7 are each independently halo, halo($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_1\text{-}\text{C}_6$)alkyl, ($\text{C}_1\text{-}\text{C}_6$)alkoxy,
trifluoromethyl, trifluoromethoxy, hydroxy, aminocarbonyl, cyano, ureido, ($\text{C}_1\text{-}$
 C_6)alkylsulfonylamino, ($\text{C}_1\text{-}\text{C}_6$)alkoxycarbonylamino or glycinamino;

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a is 1, 2, 3, 4 or 5;

b is 0, 1, 2, 3 or 4;

c is 1;

d is 1;

e is 1;

j is 1, 2, 3, or 4;

Y is CH₂;

X is C(O); and

Z is oxygen.

21. (Cancelled)

22. (Previously Presented) The compound of claim 20 wherein R⁵ is (C₂-C₉)heterocycloalkylcarbonyl, (C₂-C₉)heteroarylcarbonyl, (C₂-C₉)heteroaryl(C₁-C₆)alkylaminocarbonyl, (C₂-C₉)heterocycloalkyl(C₁-C₆)alkylaminocarbonyl, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylaminocarbonyl, ureido(C₁-C₆)alkylaminocarbonyl, (C₁-C₆)alkylureido(C₁-C₆)alkylaminocarbonyl, ((C₁-C₆)alkyl)₂ureido(C₁-C₆)alkylaminocarbonyl, aminosulfonyl(C₁-C₆)alkylaminocarbonyl or (C₁-C₆)alkylaminosulfonyl(C₁-C₆)alkylaminocarbonyl.

23. (Previously Presented) The compound of claim 20 wherein R⁵ is (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylcarbonylamino, cyanoguanidino(C₁-C₆)alkylcarbonylamino, (C₁-C₆)alkylcyanoguanidino(C₁-C₆)alkylcarbonylamino, ((C₁-C₆)alkyl)₂cyanoguanidino(C₁-C₆)alkylcarbonylamino, aminocarbonyl(C₁-C₆)alkylcarbonylamino, (C₂-C₉)heteroaryl(C₁-C₆)alkylcarbonylamino, (C₂-C₉)heterocycloalkyl(C₁-C₆)alkylcarbonylamino, or aminosulfonyl(C₁-C₆)alkylcarbonylamino.

24. (Previously Presented) The compound of claim 20 wherein R⁵ is amino(C₁-C₆)alkylureido, (C₁-C₆)alkylamino(C₁-C₆)alkylureido, ((C₁-C₆)alkyl)₂amino(C₁-C₆)alkylureido, (C₂-C₉)heterocycloalkyl(C₁-C₆)alkylureido, (C₂-C₉)heteroaryl(C₁-C₆)alkylureido, aminosulfonyl(C₁-C₆)alkylureido.

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(C₆)alkylureido, aminocarbonyl(C₁-C₆)alkylureido, (C₁-C₆)alkylaminocarbonyl(C₁-C₆)alkylureido, ((C₁-C₆)alkyl)₂aminocarbonyl(C₁-C₆)alkylureido, acetyl amino(C₁-C₆)alkylureido, or (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylureido.

25. (Previously Presented) The compound of claim 20 wherein R⁵ is amino(C₁-C₆)alkylsulfonylamino, (C₁-C₆)alkylamino(C₁-C₆)alkylsulfonylamino, ((C₁-C₆)alkyl)₂amino(C₁-C₆)alkylsulfonylamino, acetyl amino(C₁-C₆)alkylsulfonylamino, (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylsulfonylamino, ureido(C₁-C₆)alkylsulfonylamino, (C₁-C₆)alkylureido(C₁-C₆)alkylsulfonylamino, ((C₁-C₆)alkyl)₂ureido(C₁-C₆)alkylsulfonylamino, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylsulfonylamino, cyanoguanidino(C₁-C₆)alkylsulfonylamino, (C₁-C₆)alkylcyanoguanidino(C₁-C₆)alkylsulfonylamino, ((C₁-C₆)alkyl)₂cyanoguanidino(C₁-C₆)alkylsulfonylamino, aminocarbonyl(C₁-C₆)alkylsulfonylamino, (C₁-C₆)alkoxycarbonylamino(C₁-C₆)alkylsulfonylamino, aminosulfonylamino, (C₁-C₆)alkylaminosulfonylamino, ((C₁-C₆)alkyl)₂aminosulfonylamino, aminocarbonyl(C₁-C₆)alkylamino(C₁-C₆)alkylsulfonylamino, (C₂-C₉)heterocycloalkyloxycarbonylamino(C₁-C₆)alkylsulfonylamino or (C₂-C₉)heteroaryloxycarbonylamino(C₁-C₆)alkylsulfonylamino.

26. (Previously Presented) The compound of claim 20 wherein R⁵ is cyanoguanidino, (C₁-C₆)alkylcyanoguanidino, ((C₁-C₆)alkyl)₂cyanoguanidino, (C₂-C₉)heterocycloalkylcyanoguanidino, (C₂-C₉)heteroarylcyanoguanidino, (C₂-C₉)heterocycloalkyl(C₁-C₆)alkylcyanoguanidino, (C₂-C₉)heteroaryl(C₁-C₆)alkylcyanoguanidino, amino(C₁-C₆)alkylcyanoguanidino, (C₁-C₆)alkylamino(C₁-C₆)alkylcyanoguanidino, ((C₁-C₆)alkyl)₂amino(C₁-C₆)alkylcyanoguanidino, aminocarbonyl(C₁-C₆)alkylcyanoguanidino, (C₁-C₆)alkylaminocarbonyl(C₁-C₆)alkylcyanoguanidino or ((C₁-C₆)alkyl)₂aminocarbonyl(C₁-C₆)alkylcyanoguanidino, aminocarbonyl(C₁-C₆)alkylamino, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylamino, (C₁-C₆)alkoxycarbonylamino(C₁-C₆)alkylamino, aminosulfonyl(C₁-C₆)alkylamino, (C₂-C₉)heteroaryl(C₁-C₆)alkylamino, acetyl amino(C₁-C₆)alkylamino or (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylamino.

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27. (Previously Presented) The compound of claim 20 wherein R⁵ is cyano(C₁-C₆)alkylaminoalkyl or aminocarbonyl(C₁-C₆)alkylamino(C₁-C₆)alkyl.
28. (Previously Presented) The compound of claim 20 wherein R⁵ is acetylamino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkoxycarbonylamino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₂-C₉)heterocycloalkyloxycarbonylamino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₂-C₉)heteroaryloxycarbonylamino(C₁-C₆)alkylamino(C₁-C₆)alkyl, cyanoguanidino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkylcyanoguanidino(C₁-C₆)alkylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂cyanoguanidino(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylamino(C₁-C₆)alkyl, ureido(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₁-C₆)alkylureido(C₁-C₆)alkylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂ureido(C₁-C₆)alkylamino(C₁-C₆)alkyl or aminocarbonyloxy(C₁-C₆)alkylamino(C₁-C₆)alkyl.
29. (Previously Presented) The compound of claim 20 wherein R⁵ is acetylamino(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, (acetyl)((C₁-C₆)alkyl)amino(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, aminocarbonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylaminocarbonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂aminocarbonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, aminosulfonyl(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl, (C₂-C₉)heterocycloalkyloxycarbonylamino(C₁-C₆)alkyl, cyanoguanidino(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl or cyano(C₁-C₆)alkylcarbonylamino(C₁-C₆)alkyl.
30. (Previously Presented) The compound of claim 20 wherein R⁵ is amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylamino(C₁-C₆)alkylaminocarbonyl amino(C₁-C₆)alkyl, ((C₁-C₆)alkyl)₂amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, aminocarbonyl(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆) alkylcarbonylamino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₁-C₆)alkoxycarbonyl amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, (C₂-C₉)heterocycloalkyloxycarbonyl amino(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl.

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C_6)alkylaminocarbonylamino(C_1 - C_6)alkyl, (C_2 - C_9)heteroaryloxycarbonylamino(C_1 - C_6)alkylaminocarbonylamino(C_1 - C_6)alkyl, (C_2 - C_9)heterocycloalkyl(C_1 - C_6)alkylaminocarbonyl amino(C_1 - C_6)alkyl, (C_2 - C_9)heteroaryl(C_1 - C_6)alkylaminocarbonylamino(C_1 - C_6)alkyl, ureido(C_1 - C_6)alkylureido(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)ureido(C_1 - C_6)alkylureido(C_1 - C_6)alkyl or cyanoguanidino(C_1 - C_6)alkylureido(C_1 - C_6)alkyl.

31. (Previously Presented) The compound of claim 20 wherein R^5 is amino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkylamino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)amino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, acetylamino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (acetyl)((C_1 - C_6)alkyl)amino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, ureido(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkylureido(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)ureido(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, cyanoguanidino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)ureido(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, aminocarbonyl(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkoxycarbonylamino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_2 - C_9)heterocycloalkyloxycarbonylamino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, (C_2 - C_9)heteroaryloxycarbonylamino(C_1 - C_6)alkylsulfonylamino(C_1 - C_6)alkyl, aminosulfonylamino(C_1 - C_6)alkyl, (C_1 - C_6)alkylaminosulfonylamino(C_1 - C_6)alkyl or ((C_1 - C_6)alkyl)aminosulfonylamino(C_1 - C_6)alkyl.

32. (Previously Presented) The compound of claim 20 wherein R^5 is cyanoguanidino(C_1 - C_6)alkyl, (C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)ureido(C_1 - C_6)alkyl, (C_2 - C_9)heterocycloalkyl(cyanoguanidino)(C_1 - C_6)alkyl, (C_2 - C_9)heteroaryl(cyanoguanidino)(C_1 - C_6)alkyl, (C_2 - C_9)heterocycloalkyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, (C_2 - C_9)heteroaryl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, amino(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, (C_1 - C_6)alkylaminocarbonyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)aminocarbonyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, aminocarbonyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)aminocarbonyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, aminocarbonyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl, ((C_1 - C_6)alkyl)aminocarbonyl(C_1 - C_6)alkyl(cyanoguanidino)(C_1 - C_6)alkyl,

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(C₁-C₆)alkylaminocarbonyl(C₁-C₆)alkyl(cyanoguanidino)(C₁-C₆)alkyl or ((C₁-C₆)alkyl)aminocarbonyl(C₁-C₆)alkyl(cyanoguanidino)(C₁-C₆)alkyl.

33. (Currently Amended) The compound of claim 20 wherein R⁵ is (C₂-C₉)heterocycloalkylsulfonyl, amino(C₁-C₆)alkylaminosulfonyl, (C₁-C₆)alkylamino(C₁-C₆)alkylaminosulfonyl, ((C₁-C₆)alkyl)amino(C₁-C₆)alkylaminosulfonyl, (C₂-C₉)heteroarylaminosulfonyl, ureido(C₁-C₆)alkylaminosulfonyl, (C₁-C₆)alkylureido(C₁-C₆)alkylaminosulfonyl, ((C₁-C₆)alkyl)ureido(C₁-C₆)alkylaminosulfonyl, (C₁-C₆)alkylsulfonylamino(C₁-C₆)alkylaminosulfonyl, (C₁-C₆)alkoxycarbonylamino(C₁-C₆)alkylaminosulfonyl, (C₂-C₉)heterocycloalkyloxycarbonylamino(C₁-C₆)alkylaminosulfonyl, (C₂-C₉)heteroaryloxycarbonylamino(C₁-C₆)alkylaminosulfonyl, aminocarbonyl(C₁-C₆)alkylaminosulfonyl, cyanoguanidino(C₁-C₆)alkylaminosulfonyl, (C₂-C₉)heteroaryl(C₁-C₆)alkylaminosulfonyl, (C₂-C₉)heterocycloalkylaminosulfonyl, halo(C₁-C₆)alkylaminocarbonyl, hydroxy(C₁-C₆)alkylureido, halo(C₁-C₆)alkylsulfonylamino, (C₁-C₆)alkoxy carbonyl(C₁-C₆)alkylamine(C₁-C₆)alkyl, hydroxy(C₁-C₆)alkylaminocarbonylamino(C₁-C₆)alkyl, halo(C₁-C₆)alkylsulfonylamino(C₁-C₆)alkyl, aminosulfonyl, (C₁-C₆)alkylaminosulfonyl, ((C₁-C₆)alkyl)aminosulfonyl, hydroxy(C₁-C₆)alkylaminosulfonyl, or (C₁-C₆)alkoxy(C₁-C₆)alkylaminosulfonyl.

34. (New) A pharmaceutical composition comprising a compound according to claim 20, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

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